



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/665,165	09/19/2000	Kohei Abe	197336US2S	5491

22850 7590 04/17/2003

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER

DANG, KHANH NMN

ART UNIT	PAPER NUMBER
----------	--------------

2181

DATE MAILED: 04/17/2003

5

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/665,165

Applicant(s)

ABE, KOHEI

Examiner

Art Unit

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) \_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Art Unit: \*\*\*

## **DETAILED ACTION**

### ***Drawings***

Figures 7-10 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 112***

Claims 1-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1 and 8, the essential structural cooperative relationships between the "first storage area," "second storage area," and "controller" have been omitted, such omission amounting to a gap between the elements. See MPEP § 2172.01.

In claims 1, 8, and 14, as drafted, both "first storage area" and "second storage area" include "a plurality of elements." Therefore, it is unclear whether such "plurality of elements" are the same or different ones. Clarification must be made.

In claims 1, line 20, the word "address" should be changed to -- element--.

In claim 7, in line 27, "said controller" lacks clear antecedent basis. There are two different controllers specified in claim 7. In lines 26-27, "said number of a virtual channel" lacks antecedent basis.

Art Unit: \*\*\*

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Hauser et al.

As best the Examiner can ascertain from the language of the claims, these claims do not define any structure/method that differs from Hauser et al.

With regard to claims 1 and 8, Hauser et al. discloses a queue control device for ATM comprising a "first storage area" (cell buffer 128, Fig. 4) for storing a first queue (see Fig. 6, for example) including a plurality of "elements" (cells) having an "address" (cell number) specifying the next "element" (cell), and a "second queue" (see Fig. 6, for example) including a plurality of "elements" (cells) having an "address" (cell number) specifying the next "element" (cell); a "second storage area" (RAM 132, 1140, 2142) for storing "first pointer information" (queue 1 descriptor, Fig. 6, for example) and "second pointer information" (queue 2 descriptor, Fig. 6, for example), the "first pointer information" being a "head address" (head) in the first queue, and the "second pointer information" being a "tail address" (tail, Fig. 6); and a "controller" (queue manager 308,

Art Unit: \*\*\*

Fig. 4, for example) for controlling the "first and second storage areas" (cell buffer 128 and pointer RAM 132, 1140, 2142) to set not only an address specifying the head element in the second queue in the tail element in the first queue stored in cell buffer 128 but also an address specifying the tail element in the first queue in the tail element in the second queue and for controlling the first and second queues according to queue 1 and 2 descriptors stored in pointer RAM 132, 1140, 2142. In another words, in Hauser et al., one queue number is able to point to a second queue number, and the list descriptor holds the queue number of the first entry, or head, of the list and the last entry, or tail, of the list. The queue number of the head of the list is used to index into the list pointers and read the queue number of the second entry in the list. Likewise, the queue number of the second entry is used to index into the list pointers and read the queue number of the third entry, and so on until the queue number read is equal to the queue number of the last entry, or tail of the list. Therefore, it is clear that in Hauser et al., in order to add a queue to a list, the queue number of the queue being added to the list is written to the list pointer location indexed by the present tail of the list. That is when queue 2 is added for immediate transmission to the list, the address of the head of queue 2 is written to the present tail of queue 1. Also, since queue 1 and queue 2 share the same transmission channel and buffer pool 128, the address specifying the tail of queue 1 is also the address of the tail of queue 2 after all cells of queue 1 are transmitted out. The queue manager 308 controls queue 1 and queue 2 according to the head and tail stored in RAM 132, 1140, 2142.

Art Unit: \*\*\*

With regard to claims 2, 3, 9, and 10, in Hauser et al., it is clear that when queue 1 is not present the address of the head of queue 2 is stored in RAM 132, 1140, 2142 is set in queue 1 descriptor, since queue 1 and queue 2 share the same transmission channel and pool buffer. In addition, it is clear that an indicator must be placed in the address of the tail of queue 2 indicating that the tail of queue 2 is the last one to be transmitted in the absence of queue 1. And vice versa.

With regard to claims 5 and 11, if there is no other special priority is set forth in the cell and list managers, and in view of the work flow mentioned above, it is clear that queue 1 is assigned a higher priority for transmission.

With regard to claims 6 and 12, it is clear that with any known ATM (Asynchronous Transfer Mode) including the ATM used in Hauser et al., cell buffer can store a plurality of virtual channel according to each of the cells.

With regard to claims 7 and 13, the cell manager 308 is connected to the cell processor 302 which produce virtual channels.

With regard to claims 14-18, one practicing the queue control device set forth by Hauser et al. and specifically discussed above would have performed the same steps recited in claims 14-18.

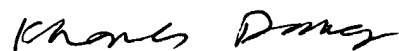
U.S. Patent Nos. 6,219,352 to Bonomi et al., [REDACTED] 6,523,060 to Kao, and 5,521,916 to Choudhury et al. are cited as relevant art.

Application/Control Number: 09/665,165

Page 6

Art Unit: \*\*\*

Any inquiry concerning this communication should be directed to Ex. K. Dang at telephone number 703-308-0211.

A handwritten signature in cursive script, appearing to read "Khanh Dang".

**Khanh Dang**  
**Primary Examiner**